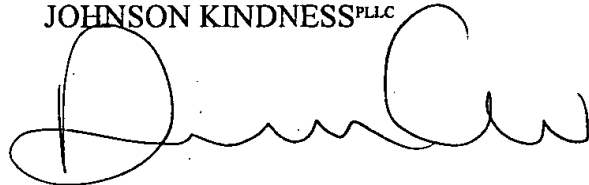## REMARKS

On February 26, 2002, applicants filed U.S. Patent Application No. 10/083,023, titled "Page Function Architectural Framework." Prior to taking up the above-identified patent application for examination, applicants respectfully request that this preliminary amendment be entered and considered together with the above-identified patent application. No new matter has been presented. If the Examiner has any questions concerning this preliminary amendment or the above-identified patent application, the Examiner is invited to contact the applicants' undersigned attorney at the number below.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service in a sealed envelope as first class mail with postage thereon fully prepaid addressed to the U.S. Patent and Trademark Office, P.O. Box 2327, Arlington, VA 22202, on the date specified below.

Date: July 12, 2002

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In the Specification:

The paragraph beginning at page 1, line 4, has been amended as follows:

The present invention relates generally to an architectural software framework for creating Web-style applications, and more particularly, to the design of Web-style application software incorporating protocols and means for expansion and interfacing with other Web style programs as well as a reusable basic programming structure, [consisting of] including abstract and concrete data types, that assists in building Web-style applications.

The paragraph beginning at page 10, line 3, has been amended as follows:

In accordance with further aspects of this invention, the set of page function services associated with each page function includes an activate service and a complete service. When the activate service of the page function is invoked, the page function is activated, i.e., allowed it to begin performing the task associated with the page function. The complete service of the page function is invoked when another page function, which has been invoked by the page function, has performed some other task. Both the activate service and the complete service, when invoked, execute a decision [selected from a group consisting of] including at least one of a decision to finish (and return to a calling page function), a decision to show the user interface page associated with the page function, and a decision to create a new page function (and navigate to the new page function).

In the Claims:

Claims 1, 7, 11, 12, 22, 27, 32, 36, 37, and 43 have been amended as shown below:

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1.   (Amended) [In a computer system including a display, a user input facility, and an application for presenting user interfaces on the display, a Web-style application comprising:] An application for presenting a user interface on a computer display, comprising:

one or more page functions, each page function having a set of exposed attributes, a set of page function services, and a binding selectively bound to a user interface page, a first subset of the set of exposed attributes defining types of information receivable by the page function, a second subset of the set of exposed attributes defining types of information returnable by the page function, the set of page function services including an activate service and a complete service, both services being invokable to execute a decision [selected from a group consisting of] selected from the group comprising a decision to finish, a decision to show the user interface page, and a decision to create a new page function; and

a frame having a set of frame services and a data structure, the set of frame services including a navigate service and a finish service, the navigate service being invokable by a page function to cause the frame to invoke the activate service of another page function and cause the other page function to perform a task, the finish service being invokable by the other page function to cause the frame to invoke the complete service of the page function, the data structure designed to store data that identified each page function to which the frame has navigated, and the relationship among page functions.

7.   (Amended) [In] For use in a computer system including a display, a user input facility, and an application for presenting user interfaces on the display, the user interfaces being associated with page functions, each page function being selectively bound to a user interface page, a method for navigating among the page functions comprising:

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displaying a frame user interface page, the frame user interface page having a region for showing the user interface page bound to a page function, the region being adapted to show one user interface page at a time;

displaying a user interface page bound to a first page function in the region of the frame, the user interface page bound to the first page function having one or more hyperlinks, at least one hyperlink adapted to initiate the performance of a task upon receipt of an input from the user input facility, the task including one or more subtasks and being defined as completed when the last subtask of the one or more subtasks is finished, each subtask including one or more page functions;

sequentially displaying user interface pages bound to the one or more page functions of a first subtask in the region of the frame, the last page function of the sequence including a hyperlink that when actuated communicates to the first page function that the first subtask is finished; and

sequentially displaying user interfaces bound to the one or more page functions of a second subtask following the sequential display of user interface pages bound to the one or more page function of the first subtask in the region of the frame without displaying the user interface page bound to the first page function when the first subtask communicates to the first page function that the first subtask is finished.

11.   (Amended) The method of Claim [6] 7, further comprising redisplaying the user interface page of the first page function in the region of the frame when the last page function of the last subtask communicates to the first page function that the last subtask is finished.

12.   (Amended) [In] For use in a computer system including a display, a user input facility, and an application for showing user interfaces on the display, the user interfaces being

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associated with page functions, each page function being capable of causing its associated user interface to present one or more hyperlinks on the display, the hyperlinks being responsive to input received from the user input facility, a method of communicating among the page functions, the method comprising:

in response to an input received from the user input facility, activating a first page function designed to perform a first task, when performing the first task, the first page function executing a first decision [chosen from a set of decisions] selected from a group [consisting of] comprising a decision to finish, a decision to show a user interface page, and a decision to create a page function;

creating a second page function designed to perform a second task if the first decision executed by the first page function is to create a page function and requesting a frame to navigate to the second page function, the frame navigating to the second page function and activating the second page function in response to the request to navigate to the second page function, when performing the second task, the second page function executing a second decision chosen from the set of decisions; and

returning to the first page function if the second decision executed by the second page function is to finish, the second page function advising the frame that the second task is finished and the frame advising the first page function that the second page function has completed the second task, the first page function then executing a third decision chosen from the set of decisions.

22.   (Amended) [In] For use in a computer system including a display, a user input facility, and an application for presenting user interfaces on the display, the user interfaces associated with page functions, a user interface programming system having a computer-readable medium that has stored thereon a data type being defined as a frame, the frame comprising:

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a set of frame services that includes a navigate service and a finish service, the navigate service being invokable by a page function to navigate to another page function to perform a task, the finish service being invokable by the other page function to communicate to the frame that the task has been performed; and

a frame data structure for storing information that identifies each page function to which the frame has navigated, the frame data structure showing the originator relationship among page functions.

27.   (Amended) [In] For use in a computer system including a display, a user input facility, and an application for presenting user interfaces on the display, one or more page functions being stored on a computer-readable medium as a data type, each page function comprising:

a set of exposed attributes accessible externally to the page function, a first subset of the set of exposed attributes defining types of information receivable by the page function, a second subset of the set of exposed attributes defining types of information returnable by the page function;

a set of page function services including an activate service and a complete service, both services being invokable to execute a decision [selected from a group consisting] including at least one of a decision to finish, a decision to show a user interface page, and a decision to create a new page function; and

a binding selectively coupled to a user interface page.

32.   (Amended) A method of communicating among a first page function, a second page function, and a frame in a page function architectural software framework, the framework

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being executed on a computer system having a display and a user input facility, the method comprising:

in the performance of a first task, the first page function issuing a request to navigate to the second page function, the request to navigate having a set of navigational parameters including an identifier of the first page function and an identifier of the second page function;

the frame receiving the request to navigate to the second page function including the set of navigational parameters;

in response to the request to navigate to the second page function, the frame issuing a request to activate the second page function including a set of activation parameters;

the second page function receiving the request to activate the second page function including the set of activation parameters;

in response to receiving the request to activate the second page function, the second page function performing a second task; and

in the performance of the task, the second page function executing a decision [selected from a group consisting] including at least one of a decision to finish, a decision to show a user interface page, and a decision to create a new page function.

36. (Amended) The method of Claim 35, further comprising the first page function receiving the notification of completion including the set of completion parameters, and executing a decision [selected from a group consisting] including at least one of a decision to finish, a decision to show a user interface page, and a decision to create a new page function.

37. (Amended) [In] For use in a computer system including a display, a user input facility, and an application for presenting user interfaces on the display, the user interfaces comprising page functions and Web pages, each page function and each Web page being capable

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of presenting one or more hyperlinks on the display, each hyperlink responsive to input received from the user input facility, a system for navigating page functions and Web pages comprising:

each page function having a set of exposed attributes, a set of page function services, and a binding selectively bound to a user interface page, a first subset of the set of exposed attributes defining types of information receivable by the page function, a second subset of the set of exposed attributes defining types of information returnable by the page function, the set of page function services including an activate service and a complete service, both services being invokable to execute a decision [selected from a group consisting] including at least one of a decision to finish, a decision to show the user interface page, and a decision to create a new page function;

a frame having a set of frame services and a data structure, the set of frame services including a navigate service and a finish service, the navigate service being invokable by a page function to cause the frame to invoke the activate service of another page function and cause the other page function to perform a task, the finish service being invokable by the other page function to cause the frame to invoke the complete service of the page function, the data structure designed to store data that identifies each page function to which the frame has navigated, and the relationship among page functions; and

one or more Web pages, each Web page being accessible by selecting a hyperlink representing a uniform resource locator, the hyperlink being presentable on a Web page.

43.   (Amended) [In] For use in a computer system including a display, a user input facility, and an application for presenting user interfaces on the display, one or more page functions being stored on a computer-readable medium as a data type, a programming system having a computer-readable medium that has stored thereon an architectural software framework, the architectural software framework comprising:

a data type defined as a page function, the page function having a set of exposed attributes accessible externally to the page function, a set of page function services, and a binding selectively coupled to a user interface page, a first subset of the set of exposed attributes defining types of information receivable by the page function, a second subset of the set of exposed attributes defining types of information returnable by the page function, the set of page function services including an activate service and a complete service, both services being invokable to execute a decision [selected from a group consisting] including at least one of a decision to finish, a decision to show a user interface page, and a decision to create a new page function; and

another data type defined as a frame having a set of frame services and a frame data structure, the set of frame services including a navigate service and a finish service, the navigate service being invokable by a page function to navigate to another page function to perform a task, the finish service being invokable by the other page function to communicate to the frame that the task has been performed, the frame data structure storing information that identifies each page function to which the frame has navigated and showing the originator relationship among page functions.

Claims 44-63 have been added.

In the Abstract:

Please delete the Abstract and replace with the following:

An architectural software framework is provided for creating Web-style application software incorporating protocols and means for expansion and interfacing with other Web-style programs, as well as a reusable basic programming structure, [consisting of] including abstract and concrete data types, that assist in building Web-style applications. The architectural

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software framework includes a page function and frame. Each Web-style application includes one or more page functions which communicate via the frame.

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